AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~.

1 (currently amended): A method for manufacturing a homeotropic alignment liquid crystal film comprising the steps of:

coating a side chain type liquid crystal polymer ~~comprising~~of a monomer unit (a) containing a liquid crystalline fragment side chain and a monomer unit (b) containing a non-liquid crystalline fragment side chain on a substrate on which a vertical alignment film is not formed, said liquid crystal polymer being capable of homeotropic alignment ~~solely~~ by heating;

after the substrate is coated with the liquid crystal polymer which is in a liquid crystal state, homeotropically aligning the liquid crystal polymer by heating; and

fixing a resulting homeotropic alignment state of the liquid crystal polymer.

2 (previously presented): The method according to claim 1, wherein a material of said substrate is a polymer, glass or metal.

3 (canceled)

4 (canceled)

5 (canceled)

6 (canceled)

7 (canceled)

8 (canceled)

9 (currently amended): A method for manufacturing a homeotropic alignment liquid crystal film comprising the steps of:

coating a liquid crystalline composition on a substrate on which a vertical alignment film is not formed, said composition being capable of homeotropic alignment ~~solely~~ by heating and comprising a side chain type liquid crystal polymer and a photopolymerizable liquid crystal compound;

after the substrate is coated with the liquid crystalline composition which is in a liquid crystal state, homeotropically aligning the liquid crystalline composition by heating;

fixing a resulting homeotropic alignment state of the liquid crystalline composition; and

applying optical irradiation to the liquid crystalline composition to fix the liquid crystalline composition.

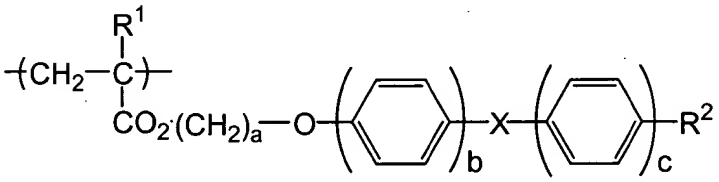
10 (previously presented): The method according to claim 9, wherein a material of the substrate is a polymer, glass or metal.

11 (canceled)

12 (canceled)

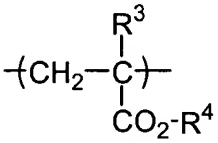
13 (canceled)

14 (withdrawn): The method according to claim 1, wherein said monomer unit (a) comprises a monomer unit represented by the following formula:

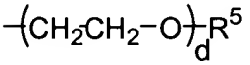


wherein R^1 is a hydrogen atom or a methyl group, a is a positive integer of 1 to 6, X is $-CO_2-$ group or -OCO- group, R^2 is a cyano group, an alkoxy group with 1 to 6 carbon, fluoro group or alkyl group with 1 to 6 carbon, and b and c are integers of 1 or 2 respectively; and

said monomer unit (b) comprises a monomer unit represented by the following formula:



wherein R^3 is a hydrogen atom or a methyl group, R^4 is an alkyl group with 1 to 22 carbon, a fluoroalkyl group with 1 to 22 carbon, or a monomer unit represented by the following formula:

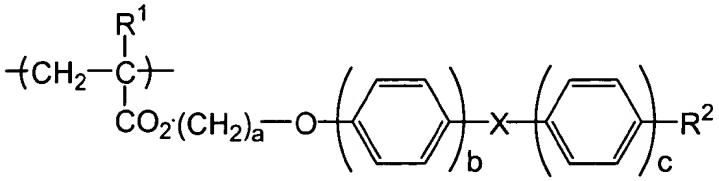


wherein d is a positive integer of 1 to 6, and R^5 is an alkyl group with 1 to 6 carbon.

15 (withdrawn): The method according to claim 1, wherein said heating is conducted at 70°C - 200°C.

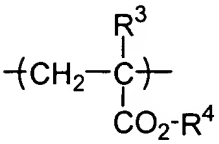
16 (withdrawn): The method according to claim 9, wherein said side chain type liquid crystal polymer comprises a monomer unit (a) containing liquid crystalline fragment

side chain and a monomer unit (b) containing non-liquid crystalline fragment side chain, said monomer unit (a) comprising a monomer unit represented by the following formula:

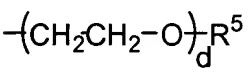


wherein R^1 is a hydrogen atom or a methyl group, a is a positive integer of 1 to 6, X is $-CO_2-$ group or -OCO- group, R^2 is a cyano group, an alkoxy group with 1 to 6 carbon, fluoro group or alkyl group with 1 to 6 carbon, and b and c are integers of 1 or 2 respectively; and

said monomer unit (b) comprising a monomer unit represented by the following formula:



wherein R^3 is a hydrogen atom or a methyl group, R^4 is an alkyl group with 1 to 22 carbon, a fluoroalkyl group with 1 to 22 carbon, or a monomer unit represented by the following formula:



wherein d is a positive integer of 1 to 6, and R^5 is an alkyl group with 1 to 6 carbon.

17 (withdrawn): The method according to claim 9, wherein said heating is conducted at 70°C - 200°C.